

1) Sticky Wax:

Function: To hold the uncured ASTICS wire during formation. The wax should harden fast upon application and remain hard to prevent springback of the uncured wire.

Recommendation: “Sticky Wax - Model Cement”
(www.kemdent.co.uk).



2) Wax Spatula:

Function: To apply sticky wax onto working model.

Recommendation: A simple Wax Scalpel with curved ends maybe used. Refrain from using sharp edges of scalpel to press the uncured wire while the wax hardens during the formation process. A heated wax scalpel may also be used instead to save time.



3) Cutter:

Function: To cut the uncured ASTICS wire.

Recommendation: Use only cutters with criss-cross blades, providing a smooth cutting action. The cutter should be able to give a clean cut with one try without damaging the sheath of the uncured wire.

The best example would be the cutter seen in the forming video and manual.



4) Light-Curing Unit:

Function: To cure/harden the uncured wire after forming.

Recommendation: The uncured wire will cure when exposed to (blue) light of a wavelength of approximately 475 nm for at least 30 seconds. Any light curing unit of choice must be able to emit light of the above requirements. A good example would be the Dentsply Triad 2000 curing unit.



5) Sheath Removal:

Function: To remove the sheath from the cured ASTICS wire after curing.

Recommendation: The simplest and easiest tool to use is a standard pen-knife. It is important to utilize the appropriate angle and depth during the cutting action. This may take some practice to build familiarity. Alternatively one may use a modified Dentsply Precision Electric Heat Knife. The blades and attachment screws should be replaced with a round 0.45 mm Nichrome wire.

6) Medical Grade Adhesives:

Function: To bond the cured ASTICS wire to the metal connectors:

Recommendation: The following adhesives are recommended:

- Loctite 3982 (heat-cure)
- Epotek 302-3M (chemical-cure)

Note: If a heat-cure adhesive is chosen (for example Loctite 3982), the curing temperature should not exceed 100 °C (212 °F).

7) Oven (Required Only for Heat-Cure Adhesive):

Function: To cure heat-cure adhesive.

Recommendation: A well calibrated dry oven with a digital display or dial allowing the user to set the preferred temperature is ideal. An example would be Sanyo convection oven (Model: MOV-112F).

8) Block Out Compound (Required Only for Heat-Cure Adhesive):

Function: To secure the position of the cured ASTICS wire on the dental model during the heat-cure step.

Recommendation: "Block Out Compound" Manufactured by Henry Schein INC.

9) Silicon Carbide Paper:

Function: To make fine length adjustments to the cured ASTICS wire.

Recommendation: "Silicon Carbide Grinding Paper" Grit 600/P1200